UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
JAMA, ISAAK R

ART UNIT	PAPER NUMBER
2617	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _06/23/2006_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-18_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-18_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _23 June 2006_ is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _06/23/2006_.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2.   Claims 1-8, 10 and 12-18 are rejected under 35 U.S.C. 102b as being anticipated

by U.S. Patent Number 5,790,817 (Asghar).

3.   Regarding claims 1 and 16-18 Asghar discloses a radio base station **[Figure 1]**

comprising: a monitor **[Figure 3, # 212]**, memory **[Figure 3, # 202]**, and one or more

resources **[Figure 3, #s 230, 232 i.e. A/D and D/A]**, said memory being connected to

the monitor and arranged for storing tasks and data **[Figure 4, Step 402]**, each of said

resources being connected to the monitor and arranged for at least one of performing a

function and executing a program **[Column 3, lines 42-47]**, at least one analog signal

manifold comprising input lines, output lines, and nodes for making connections

between input and output lines, said input lines and output lines being connectable to

predetermined resources **[Column 8, lines 46-51]**, and said nodes being arranged to

perform a mathematic operation on an incoming signal on the input lines **[Column 12,**

lines 26-49; i.e. DSP architectural enhancements include using a register file to

separate dual memories from functional units allows parallel operation of

functional units including pipelining arithmetic logic unit (ALU)].

4.   Regarding claim 2, Asghar discloses resources that are arranged to execute a program are also arranged to generate trigger signals and send them to the monitor, said monitor being arranged to receive said trigger signals, to read one or more tasks related to said trigger signals from said memory, to check whether resources required for performing said task are available and to send commands to selected resources specifying the task to be performed **[Column 8, lines 46-60; i.e. A/D conversion logic receives analog signals and provides corresponding digital signals to a DSP, and a D/A conversion logic receives digital signals from the DSP and provides corresponding analog signals output from the communication device]**.

5.   Regarding claim 3, Asghar discloses connections between said memory and said monitor, and connections between said resources and said monitor are implemented by means of a bus **[Figure 3, # 214]**.

6.   Regarding claim 4, Asghar discloses resources are arranged for mutual communication via said bus **[Figure 3, # 214]**.

7.   Regarding claim 5, Asghar discloses wherein using the bus is based on a datagram principle **[column 2, lines 54-67; i.e. two or more DSPs are coupled through dedicated address and data buses]**.

8.   Regarding claim 6, Asghar discloses wherein said memory comprises a task memory and a data memory **[column 8, lines 61-64; i.e. code which is synonymous with task and data memory]**.

9.   Regarding claim 7, Asghar discloses wherein said monitor comprises a state machine sequencer for handling several state machines in parallel **[Figure 3, # 222, columns 5 & 6, lines 66-67 and 1-17]**.

10.   Regarding claim 8, Asghar discloses wherein said memory comprises a ROM portion **[Figure 3, # 203; i.e. non-volatile memory]** and a RAM portion **[Figure 3, # 202, i.e. system memory]**, said ROM portion storing state machine definitions for said state machine sequencer, task definitions and default structures **[Columns 8 & 9, lines 65-67 and 1-11]**, said RAM portion storing dynamic data **[Column 9, lines 29-32]**.

11.   Regarding claim Regarding claim 12, Asghar discloses, Asghar discloses wherein said one or more resources comprises at least one of: a transmitter, a receiver, a digital analog converter, an analog digital converter, a control unit, and a digital signal processor **[Figure 2, #s 212a, 212b, 232, 222, 212a and b]**.

12.   Regarding claim 10, Asghar discloses wherein said monitor comprises an executor arranged for: sending commands to resources; sending task block requests to memory; receiving status information from resources; and receiving task blocks from memory **[Figure 4, column 10, lines 26-33]**.

13.   Regarding claim 13, Asghar discloses wherein said one or more resources comprise at least one digital signal processor storing an executable image for performing a program **[Figure 5, # 212]**.

14.   Regarding claim 14, Asghar discloses wherein said one or more resources comprise a plurality of transmitters, a plurality of receivers, a plurality of digital analog converters, and a plurality of analog digital converters said at least one analog signal

manifold being arranged for making connections between said plurality of transmitters

and said plurality of digital analog converters, and for making connections between said

plurality of receivers and said plurality of analog digital converters **[Figure 2, #s 212a,**

212b, 232, 222, 212a and b, and Figure 3, #214 connecting all those elements].

15.   Regarding claim 15, Asghar discloses wherein said mathematic operations

comprise at least one of multiplying, adding, subtracting, and one-to-one connecting

[Column 12, lines 26-49; i.e. DSP architectural enhancements includes pipelining

arithmetic logic unit (ALU) that does mathematical operations].

Claim Rejections - 35 USC § 103

16.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

17.   Claims 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over

U.S. Patent Number 5,790,817 (Asghar) in view of U.S. patent Number 6,976,021

(Ramakrishnan).

18.   Regarding claim 9, Asghar is discussed above in relation to claim 8; but Asghar

fails to specifically disclose that the RAM portion stores a resource allocation table, a

data block list, and data blocks. Ramakrishnan teaches a method and system for

managing a re-usable resources whereby a DRAM memory stores a hash table and

active doubly linked lists that are initialized and managed via a resource allocation

module **[Figure 28, column 15, lines 36-55]**. Therefore, it would have been obvious to

a person of ordinary skill in the art at the time the invention was made to include the

method of Ramakrishnan in the multiprocessor communication architecture Asghar in

order to facilitate fast accessibility.

19.   Regarding claim 11, Asghar further discloses wherein said monitor comprises an

executor arranged for: sending commands to resources; sending task block requests to

memory; receiving status information from resources; receiving task blocks from

memory; and maintaining said resource allocation table **[Figure 4, column 10, lines

26-33]**.

Conclusion

21.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure. U.S. Patent Application Publication Number 2002/0123365

(Thorson et al.) teaches scalable base station architecture. U.S. Patent Application

Publication Number 2003/0200429 (Aspegren et al.) teaches distributed processor

architecture of a base station. U.S. Patent Application Publication Number

2003/0026237 (Mohebbi et al.) teaches a cellular base station with soft partitioning. U.S.

Patent Application Publication Number 2002/0064142 (Antonio et al.) teaches base

station architecture. U.S. Patent Application Publication Number 2003/0008684 (Ferris)

teaches a digital wireless base station.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to ISAAK R. JAMA whose telephone number is (571)270-

5887. The examiner can normally be reached on 7:30 - 5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Lester G. Kincaid can be reached on (571) 272-7922. The fax phone

number for the organization where this application or proceeding is assigned is 571-

273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/IRJ/

/Lester Kincaid/

Supervisory Patent Examiner, Art Unit 2617